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ABSTRACT

The philosophical roots of the concept of lifelong learning are considered in relation to the views of Socrates, Plato, and Aristotle. They pioneered in their analyses of intellectual development and in the importance of the use of the mind throughout the life span. Plato and Aristotle added metaphysical arguments to support their systems of thought. Both outlined a specific sequence of studies to develop the powers of reasoning, and both established institutions wherein students and scholars could pursue learning for an indefinite period of time. Both Plato and Aristotle believed that certain sorts of study enabled the philosopher to engage in a lifetime of study that propelled toward his Ideal. Both emphasized the importance of early molding of the child and the importance of stories and music and gymnastics for the growing body. Plato thought the study of mathematics to be particularly important in helping the adolescent mind learn to do abstract thinking. Plato thought that after a period of intensive study of dialectics, or logical reasoning, at age 50, the learner was intellectually prepared to begin the study of philosophy, which would continue to engage his attention until the completion of life. Aristotle placed less emphasis on the study of mathematics and more stress on the value of reading, writing, and drawing as tools to facilitate learning. Like Plato, Aristotle felt that the study of philosophy should come late in life, after experiences of living had given to the student a richness of thought that would make subjects that depended on experience more valuable. Both Plato and Aristotle emphasized the importance of the complete life span in determining the degree of happiness reached during that life. A bibliography is appended. (SW)

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The Philosophical Roots of Lifelong Learning

Rosa B. Lewis

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Learning is a "lifelong task which everyone should undertake to the limit of his strength."

Plato, Laws, 644b.

"The activity of our intelligence constitutes the complete happiness of man, provided that it encompasses a complete span of life."

Aristotle,
Nicomachean Ethics, 1177b25.

The activity of our intelligence is lifelong, for ". . . one swallow does not make a spring, nor does one sunny day."

Aristotle,
Nicomachean Ethics, 1098a.

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FOREWORD

In the booklet "Future Directions for a Learning Society," The College Board makes this statement:

> A "learning society" is one of the oldest ideas in education. Creating it in America today is one of the newest.
>
> The Greeks spoke of **paedeia**: society and culture conceived as an environment for the lifelong growth of an individual. Today, the idea has taken hold of our imagination again, after an era in which people commonly thought of "learning" in relation to just one institution: the formal educational system. "Not I, but the city, teaches," said Socrates. Today we are glimpsing this truth anew.
>
> For several decades educators have been stirred by a vision of a society whose citizens would have, throughout all of their lives, opportunities to expand their minds, enrich their spirits, provide for their personal and career needs, and contribute to the common good. In recent years the excitement has spread to include policy-makers and leaders in business, labor unions, government, and other sectors of society.
>
> Yet the image of the learning society has remained vague — no one really knows what future direction should be taken to reach it.
>
> This is quite natural. Whenever a fresh ideal grips our imagination, observed Alfred North Whitehead in **The Aims of Education**, it presents itself first as romance, and only later with precision. The learning society is such an ideal in America today.
>
> We are now challenged to advance from general affirmation and enthusiasm — Whitehead's exhilarating but transitory stage of romance — to the maturer stage of precision.

In the stage of precision, the general concepts and goals of the learning society will be "reflected in public policy, and translated into institutional and personal practice." This process will, of course, necessitate setting "priorities for future action."

No student of postsecondary education can deny the timeliness of The College Board's statement. None can deny the importance of the concept of lifelong learning as the postsecondary enterprise faces a time of great change, change largely spurred by significant demographic shifts which will necessitate institutions adjusting to meet the needs of a reconstructed learner population. If colleges and universities are to meet successfully the challenge of a learning society, it is important that those giving direction to change have an understanding of the philosophical roots of the concept of lifelong learning. If leaders full of enthusiasm speed from Whitehead's stage of romance to the stage of precision, they are likely to imbue lifelong learning with the same superficiality that has marked other postsecondary responses, procedures, and issues.

Dr. Rosa Lewis has written a monograph that will aid those who desire knowledge of the theoretical underpinnings of a most important current movement. Against the background of Fourth Century Greece, she presents often complex philosophical notions with clarity and brevity. Certainly those in postsecondary education who appreciate the importance of philosophy as it informs current issues are in her debt.

John Y. Reid, Director,
John H. Russel Center for the
Study of Higher Education

HISTORICAL BACKGROUND

In Athens, prior to the Fifth Century, B.C., there was no organized system of education beyond the elementary stage, which included the study of gymnastic (i.e., physical education) and music.[1] Gymnastic was concerned with the training of the body. Music was a general term which included the reciting of poetry, drama, counting, singing, and lyre playing, all of which were directed toward the development of good taste, judgment, and "suitable moral qualities."[2] Formal elementary education was available only to those persons who had adequate leisure and affluence to afford it.

Greek tradition held that all of Athens was a school,[3] with everything which surrounded the resident considered to be a part of his education. Athenians felt that they learned through exposure to the games, to architecture, to drama, to oral recitations of the poets, to music and dance, and to the laws of the city state. Citizens of Athens were loyal to their city, and they took great pride in leading a life which they thought to be distinctive and good.[4] It was difficult for them to conceive of learning apart from the city state, their teacher. There were no terminal points to this education, for it was assumed that learning within the context of the city continued throughout one's life span. Solon had said in the first half of the Sixth Century: "As I grow old, I learn many things."[5]

Prior to the Fifth Century, Athens was ruled by an aristocratic class, and it was taken for granted that the qualities of good judgment and excellence which enabled a person to be able to rule were inherited traits, characteristic of the aristocrats. During the first half of the Fifth Century, however, Athens became a democracy. The growth of commerce enabled a sizeable middle class to emerge, and these newly affluent persons had the means to allow them to purchase slaves to do the tedious work of everyday life. New leisure, provided by the use of slaves, enabled male citizens to participate in direct democracy. The newly enfranchised citizens felt that they needed training in public speaking and the art of argument in order to participate effectively. These citizens, who had formerly assumed that the earlier aristocratic rulers were born with excellences which fitted them to rule, wanted now to be taught those same excellences. There was a need in Athens for an additional sort of education, to be added to the old style elementary education of an earlier day.

The educational void was filled somewhat during the last half of the Fifth Century by itinerant teachers called "sophists."[6] Coming from many parts of the ancient world, these sophists began, informally and in a non-institutional way, to offer training in skills such as rhetoric and argumentation, which were in high demand.[7]

The sophists, each of whom gathered around him a group of paying students, travelled about the city of Athens, teaching in parks, homes, the market place, and in any other location where a group might be accommodated. The teachers assumed that ordinary persons could learn to become effective citizens and that the excellences could be taught. These teachers offered to ordinary Athenians a catch-up education, which the aristocratic rulers of earlier years had absorbed as part of their birthright.[8] Their students were men of all ages, and the length of each teacher's course of study was indefinite. The customers must have been satisfied with the results, for the teachers prospered, and some became quite wealthy. Protagoras, a famous early sophist, was seen in Plato's dialogue of the same name, where he explained that the student would do the following:

> . . . learn only what he has come to learn. What is that subject? The proper care of his personal affairs, so that he may best manage his own household, and also of the State's affairs, so as to become a real power in the city, both as speaker and man of action.[9]

James Jarret, in commenting on the radical changes in education brought about by the sophists, wrote that they helped to popularize intellectual inquiry, reduced the emphasis on physical activity, and extended formal education into adulthood.[10] The sophists, as a group, developed no comprehensive theory of education, largely because each differed from the others, but they were a strong force for teaching the technical skills useful to the man wanting to participate in Athenian government. Their emphasis was not on education for its own sake, but on education as a means to an end, that end being the effective participation in the assembly and in the courts.[11]

The teaching of the sophists was not aimed at a great Ideal[12] for man, but was more role-related. Standing in opposition to the sophists, and believing that education should be directed toward some Ideal, were Socrates, and the two Fourth Century philosophers, Plato and Aristotle. As seen through the writings of Plato, Socrates' mission in life was to help men care for their souls, so that, at death, the soul might be in good health and ready for whatever unknown fate awaited it. Learning and the search for truth were, to Socrates, a preparation for death, and these processes took place over an entire lifetime.

Plato's Ideal also demanded a lifetime of study by the philsospher so that he might, ultimately, attain knowledge of the Form of the Good. Aristotle's Ideal demanded that man, through continuous study and contemplation, finally achieve the full potential which was possible for him. This potential was inherent in man's being, in his matter; the end for which he was aiming could be gained only through intellectual effort lasting a lifetime.

NOTES

[1]John P. Lynch, *Aristotle's School* (Berkeley: University of California Press, 1972), p. 37.

[2]John W. H. Walden, *The Universities of Greece* (Freeport, New York: Books for Libraries Press, 1909), p. 10.

[3]Kenneth Freeman, *Schools of Hellas* (New York: The MacMillan Co., 1970), pp 237-238. Freeman was making reference to this phrase of Pericles: ". . . I say that Athens is the school of Hellas, and that the individual Athenian in his own person seems to have the power of adapting himself to the most varied forms of action with the utmost versatility and grace." From "Pericles' Funeral Oration," *Source Book of the History of Education for the Greek and Roman Period*, ed. Paul Monroe, (New York: The Macmillan Co., 1926, p. 28.

[4]Werner Jaeger, *Paideia* I (New York: Oxford University Press, 1939), p. 108.

[5]Solon, fragment 17, in *The Work and Life of Solon, with a Translation of His Poems*, by Kathleen Freeman (New York: Arno Press, 1976), p. 212 (originally published, 1926).

[6]The word "sophist" need not be capitalized. It is comparable to the words "teacher," "philosopher," and "professor." Some authorities choose to use the capital for emphasis, while other equally respected writers do not do so.

[7]Jaeger, *Paideia*, I, pp. 286-322.

[8]Ibid.

[9]*Protagoras*, 318d to 319a, in *Plato: Protagoras and Meno* (New York: Penguin Books, 1956.) Greek texts have been given widely-recognized numberings, in a manner similar to the numbering of chapters and verses in the *Bible*. Thus 318d tells us that this passage quoted is from the d portion of part 318. This system enables the reader to find the quotation in any good edition of Plato's *Protagoras*. This method of numbering is found in the works of both Plato and Aristotle.

[10]James Jarret, *The Educational Theories of the Sophists* (New York: Teachers College Press, 1969), p. 18.

[11]Jaeger, *Paideia* I, pp. 298-9.

[12]"Ideal" is capitalized throughout this paper for emphasis. It is a vital component of the theme: that lifelong learning in Fourth Century Greece was necessary if one believed, as did Socrates, Plato, and Aristotle, in some ultimate goal, which was attainable through study.

SOCRATES AND LIFELONG LEARNING

The Greeks felt that the entire span of a person's life was important in judging the quality of that life. Solon, the wise leader of an earlier Athens, was quoted by Herodotus as having said, "Let no man call me happy until I am dead,"[1] by which Solon meant that one must not say of himself that he had led a happy life until the completion of that life. Aristotle, referring to Solon's statement,[2] added that ". . . one swallow does not make a spring, nor does one sunny day; similarly, one day or a short time does not make a man blessed and happy."[3] This is to say that what one does during a complete lifetime entitles one to be called a happy person.

Socrates proclaimed that a person's happiness and the health of his soul demanded that he seek wisdom through practicing philosophy until the very day of his death.[4] For Socrates, the lifetime of learning was a "practice for death and dying,"[5] so that the soul, the lively part of a person, might be in its healthiest possible condition for whatever might lie ahead after the soul left the body.[6]

Socrates devised an individualized method of instruction to enable a person to learn. Socrates thought that learning could not be poured into the student by a teacher, but that the student must look within himself for answers to his own questions. The task for the teacher was to aid the learner to become aware of what was in his soul in a manner not unlike that of a midwife aiding in a birth, "except that . . . I look after their souls when they are in labor."[7]

The Socratic method, the elenchus, proved often to be very irritating to the public, even though Socrates insisted that he was only seeking answers.[8] This philosopher wanted to irritate self-confident, proud persons so that their discomfort might lead them to an awareness of their real ignorance, which was needed if learning were to occur. "Philosophy begins in wonder,"[9] he observed, and wonder comes only when one has an awareness of his own ignorance.

The health of the soul depended on a constant attention to learning, and Socrates sought to find definitions of moral concepts, using the elenchus to extract answers that he felt must exist. He was certain that there was somewhere to be found a final definition of each abstraction,[10] though the quest for such knowledge might be a lifelong one. Self-examination was the key. "The unexamined life is not worth living for man,"[11] Socrates told his accusers in his final defense before the Athenian jury.

Educational philosophy began when Socrates sought to find a definition of arete, which is best defined as "excellence." He wanted to secure a definition of arete which was whole and not divided up into instances of the concept.[12] He also wondered if it were possible for the concept, once defined, to be taught to others, or whether it must be learned through introspection.[13]

Socrates never found an answer which satisfied him, but he started philsosphers thinking about the nature of the learning process. Socrates seemed sure that wisdom came to a person only through introspection, using the elenchus as a tool for extracting this learning from one's own soul.

Learning, which was for Socrates the gaining of knowledge of the nature of moral concepts, was a task of a lifetime. Before the jury trying him for his life he stated this:

> . . . as long as I draw a breath and am able, I shall not cease to practice philosophy, to exhort you, and to point out to anyone of you whom I happen to meet: . . . are you not ashamed of your progress to possess as much wealth, reputation and honours as possible, while you do not care for nor give thought to wisdom or truth, or the best possible state of your soul?[14]

Only by lifelong diligence could one come to know what resided in one's own soul.

NOTES

[1]Solon, quoted by Herodotus in *The Famous History* (B. R., 1584) (New York: AMS Press, 1967), p. 22

[2]*Nicomachean Ethics*, 1100a5, translation and comments by Martin Ostwald. (Indianapolis: The Bobbs-Merrill Co., 1962).

[3]Ibid., 1098a15.

[4]*Apology*, 29d-e, translation and comments by G.M.A. Grube. Found in *The Trial and Death of Socrates* (Indianapolis: Hackett Publishing Co., 1977).

[5]*Phaedo*, 64a, translation and comments by G.M.A. Grube. (Indianapolis: Hackett Publishing Co., 1977).

[6]*Gorgias*, 526d, translation and comments by W. C. Helmbold. Found in *Plato: Gorgias* (Indianapolis: The Bobbs-Merrill Co., 1952).

[7]*Theaetetus*, 150b, translated by Benjamin Jowett, in *Great Books of the Western World VII (Chicago: Encyclopedia Britannica, 1952).*

[8]*Meno*, 80c, in *Plato: Protagoras and Meno*, translation and comments by W. K. C. Guthrie. (New York: Penguin Books, 1956).

[9]*Theaetetus*, 155d.

[10]*Charmides*, 159a, translated by Benjamin Jowett, in *Great Books of the Western World* VII.

[11]*Apology*, 38a.

[12]*Meno*, 77b.

[13]*Protagoras*, 357d.

[14]*Apology*, 29d-e.

PLATO AND LIFELONG LEARNING

Metaphysical Bases

Plato, a student of Socrates, continued to search for an understanding of how learning occurs in human beings. He retained Socrates' method, the elenchus, as a tool and incorporated it into his early dialogues as a literary device. He agreed with Socrates in thinking that learning cannot be poured into a person by some outside agent; but he differed from his teacher in arriving at a mystical explanation of how one dredged up truth from within oneself.

The soul must be immortal, thought Plato, and it must be full of knowledge. Therefore, each person has within himself a great deal of wisdom which is there for the knowing, if one is willing to study himself diligently over a long period of time.

The individual comes to learn the wisdom which is within himself through a process which Plato called "Recollection." In **Meno**, Plato has Socrates to say that "seeking and learning are in fact nothing but recollection," and there is "no such thing as teaching, only recollection."[1] Experience gained outside the soul does not lead to wisdom, for wisdom comes only from learning that which is already within the soul. Examination of anything through use of the senses deceives the soul,[2] he felt. Only through "pure thought alone" does "reality become clear."[3]

The soul, thought Plato, contains knowledge of the Forms.[4] Plato insisted that the Forms were real, existing entities. Such ideas as "temperance," "piety," "virtue," and "courage," existed in the soul to be discovered through introspection alone. "Nothing is so evident to me personally," he wrote, as "that our soul exists before we are born, and equally so that reality [i.e., the Forms] of which we are now speaking."[5]

The highest Form was the Form of the Good, a Form which encompassed all the other Forms. Only a person who had lived an entire lifetime learning and studying the lesser Forms could possibly achieve a final vision of the Form of the Good. If the learner "seriously concerned himself with the pleasures of learning" what was within the soul, the learner had reason to "be of good cheer about his own soul" at the end of his life.[6] Plato felt that "the highest object of knowledge is the essential nature of the Good," and knowledge of the nature of the Good is "a thing . . . that every soul pursues as the end of all her actions."[7]

In an effort to clarify the theory of Forms, Plato offered his readers the Allegory of the Cave.[8] In his cave were prisoners, chained and facing the wall of the cave, able to see only shadows of what passed by. If some of the prisoners were to be released and were to go toward the entrance of the cave, they would be blinded by the unaccustomed light of the sun and would hide their eyes. As they approached the entrance, the sun would be more than they could tolerate at first, but repeated exposure might accustom them to the light. Once accustomed to its brilliance, they would find the thought of returning to the murky darkness of the cave to be a very unpleasant one.

Accordingly, said Plato, mortals who were uneducated and who derived all that they knew through their senses were like the chained prisoners in the dark cave, able only to see "shadows" on the wall, and not true reality. Education began to release peoples' chains, making them progress toward the light of knowledge. As they progressed, they were learning not to rely on their senses, by which they saw mere images, but were able more and more to conceptualize the real truth of things. Finally, after many decades of learning, they were able to see the Sun itself, which Plato meant to be the allegorical equivalent of the Form of the Good: "In the world of knowledge, the last thing to be perceived and only with great difficulty is the essential Form of Goodness."[9]

The brightness of the vision of the Form of the Good would be so satisfying that those able to reach that level of awareness would want to continue forever to savor

learning and philosophy in the brightness of the Sun. But the philosophers had to be compelled to return to the sensory world of the cave in order to help lead other captives out of darkness. The learned ones would be reluctant to re-enter, but it was imperative that they dedicate themselves to being leaders of the uneducated members of society. "It is no wonder if those who have reached this height are reluctant to manage the affairs of men. Their souls long to spend all their time in the upper world,"[10] said Plato. Yet each must be compelled to "go down, each in his turn, to live with the rest."[11]

Plato sought further to clarify the theory of Forms by using the symbolism of the "divided line."[12] He suggested that the reader imagine a divided line, on the lower portion of which one should place things of the material world, sensory things. On the upper portion of the divided line, the reader was to imagine things of the mind and of the eternal world. These were intelligible, real things. The sensory things on the lower part of the divided line were but shadows, images, while above were things apprehended by reason and understanding. Plato's educational system was devised to help the soul move progressively up this ladder so that, ultimately, after long study, a knowledge of the Form of the Good might be attained.

	OBJECTS[13]	STATES OF MIND
INTELLIGIBLE WORLD OF FORMS	**The Good** Form of the Good and other Forms seen in their connection with Form of the Good	Intelligence, or Knowledge
	Forms not seen in connection with Form of the Good	Thinking Mathematical reasoning
WORLD OF APPEARANCES OR PARTICULARS	Visible things Physical objects	Belief Commonsense assurance
	Images Shadows	Imagining Illusion

Of relevance to lifelong learning was Plato's conception of a three-part soul, with bodily functions as part of, but not the best part of, the soul.[14] The soul consisted of a highest part (the reasoning part), a middle part (the spirited part), and a lowest part (associated with the appetites).[15] Plato referred to the part of the soul which reasoned as the rational part; and of the appetitive part he said that it "is distracted by sexual passion and all the other desires."[16]

A soul had to be controlled in an orderly way, so that "it will be the business of reason to rule . . . on behalf of the entire soul; while the spirited element ought to act as its subordinate and ally."[17] The well-ordered soul would be ruled by the reasoning part, with reason aided by the spirited part keeping the appetitive part in check. Plato sought to clarify his meaning by comparing a healthy soul, in which the mental part ruled over the appetitive part, with a healthy state, wherein persons trained in reason ruled over workers. Workers were persons without philosophical abilities, and who were more dependent on the desires than on reasoning elements.

Plato's Republic was the ideal state, "the soul of man writ large."[18] In it there existed true justice because, by common agreement, the jobs performed by the philosophers, the spirited soldiers, and the common workers, were done with a proper understanding that each worked for the common good of all. "In our state, if anywhere," believed Plato, "governors and the governed will share the same conviction on the question of who ought to rule."[19] With this meshing of interests for the common good, there would exist justice in the state.[20]. Similarly, justice in the soul involved a meshing of the parts of a healthy, justice-filled soul for the common good of the entire organism.

In this ideal society, the rulers were like the rational part of the soul only if they were highly educated so that through influence, not force, they could dominate and control the less-well-endowed members of society. In order that trained philosophers would be available to rule over the rest, Plato drew up a detailed educational system, devised to sort out, from earliest childhood, the natural leaders from among the populace and to train them in progressively more conceptual studies. Late in life there would be still further siftings of the best from the slower. Only the very best and fittest would continue to learn until very mature years, thereby attaining a knowledge of ultimate truth. This highest education was a philosopher's training and had to be done apart from society. Philosophers grew to love learning, and wanted nothing so much as to continue to study as long as life lasted.

The Republic could not allow these philosophers to stay aloof forever, however, for the society needed their intellectual skills in leadership positions. So the scholars, late in life had to be persuaded, often against their wills, to re-enter public life for the good of the state. In the well-ordered state, philosophers should rule.[21] As Plato well knew, his own Athens was not a perfect state like that which he had in mind. Athens was a democracy, which was to Plato an unhealthy system. A democracy, where the common people ruled, was, to Plato, like a soul in which the appetitive part ruled over reason. Because such a deplorable system did exist in Fourth Century Athens, Plato knew that his philosophers would not be allowed to rule. So he referred to his own ideal state as a myth, or a pattern which was to be aimed at, but which would not be attained in this life. He feared that perfect order in the soul of man was impossible without order in the state; both conditions of perfection were models, Forms, to be hoped for.[22] In the non-perfect society, health in the soul might be attained only by a separation of philosophers from society at large. Their ideal could be pursued in a safe place, apart from the world. Pure contemplation could be engaged in for a lifetime, away from the turmoil of democracy. Such a refuge could be found in Plato's Academy, where pure learning was pursued.

Education From Childhood To Old Age

Plato developed a system of education which he thought might be adequate for the task of turning the soul in the right direction, so that it could achieve its right order. The intellectual part of the soul must dominate the other parts if persons were to take their proper places in the just society of the **Republic**. Plato's ideal state demanded that, for its own order, everyone should have some education, with the Guardians (soldiers and intellectuals) having superior educations. A very select number of students who, after years of learning, showed outstanding intellectual abilities, would be sent "the long way round,"[23] to enable them to see reality and thus lead the other citizens toward the Form of the Good. The training of the philosophers, to be the educators of the Republic, was the end result of Plato's system of education.[24]

He outlined in the **Republic** his curriculum for the young children of his ideal state. It was traditionally Greek, and not very different from the system outlined in **Protagoras**, where he had commended the reading of "good poets" to children so that they might be "inspired to imitate them and long to be like them."[25] Music was recommended as a study which would "instill self-control and deter the young from evildoing." Lyric poetry, which combined music and literature, would make them

civilized, balanced, and better adjusted, for "rhythm and harmonious adjustment are essential to the whole of human life." Unfortunately, this education which he outlined was available only to the children of wealthy citizens.

For Plato's ideal state to emerge, everyone would have to receive at least an elementary education, and it would have to be provided by the state. The workers would not be able to be an orderly part of this system unless they, too, had harmonious souls and saw the virtue in keeping their place in the social order. Therefore, though the degree of harmony achieved in the souls of workers would be less than that achieved in the souls of philosophers, to enable them to live in an orderly manner, all citizens were to receive a lower education in music and gymnastic. The education would begin with the telling of stories, which would contain some truth, to provide good examples and enhance the molding of the child. Plato felt that "the first stories which a child hears shall be designed to produce the best possible effect on his character.[26] The early upbringing of those who might become future leaders was very important in Plato's design. He spoke ominously of the evils which might befall a "nature full of generous promise, ruined by bad upbringing." With a good upbringing, the future philosopher "must grow to the full flower of excellence."[27]

An early musical education, in which the singing of lyric poetry was particularly desirable, would contribute to character development and lead to harmony in the soul. When combined, music and poetry would bring about "grace of body and mind which is only to be found in one who is brought up in the right way."[28]

Physical training for the young child would contribute to the development of harmony in the spirited and in the intellectual parts of the soul.[29] Plato insisted that his good citizens' bodies not be overdeveloped so that they were excessively muscular or athletic. He cautioned that "there could be no worse hindrance than his excessive care of the body, over and above the exercise it needs to keep it in health."[30] An excessive emphasis on music and literature would lead to softness, while an overdevelopment of the body would lead to uncivilized hardness.[31]

It was not clear at what point in his system the education of workers ceased, but presumably it did not go beyond a few early years. Plato's system, fundamentally, was designed with the Guardians in mind. For those leaders, in whom Plato was interested, the early affective (emotional) and physical training, plus elementary arithmetic and geometry "introduced in childhood," would suffice until the youths were ready to serve a traditional stint in the military, which lasted from about eighteen to twenty years of age. Study was not to accompany military training because "weariness and sleep are unfavourable to study" during that strenuous period of life.

At the age of twenty, testing, which would continue for decades, would be begun for the students in order to select out those special few whose aptitudes were so superior that they would be encouraged to continue their studies. For the chosen ones, the childhood studies would, for the next ten years, be brought together "in a comprehensive view of their connexions with one another and with reality," said Plato. Mathematics would be studied for its ability to prepare the mind for abstract thinking. At age thirty, those who continued to show a superior aptitude for seeing "the connexions of things" would be chosen to study dialectic, or logic, in order to become able to rise above the senses and to "follow truth into the region of pure reality."[32] The study of dialectic was delayed until this late date because Plato had come to feel that younger persons would use argument "as a form of sport." For five years, dialectic would be studied by the budding philosophers, until, at age thirty-five, Plato would send them "back into the cave" to be officers and military commanders.

At the age of fifty, those who had survived and had proved themselves "must be brought at last to the goal," said Plato. "They must lift up the eye of the soul to gaze on that which sheds light on all things." After they had seen "the Good itself," they were

free to spend the remainder of their lives in study, returning from time to time, as needed, to serve their state. At that point Plato reminded his readers that some of those chosen to be philosophers "will be women . . . who are found to have the necessary gifts."[33]

Plato was unusual in advocating an education for women.[34] He wanted to teach them the same things as men, from earliest childhood on, so that they could breed and rear good citizens, and so that they could become Guardians.[35] They were even to participate equally in athletics, and be naked as was Greek custom.[36]

In the **Republic** careful breeding rules would be observed; there would be limits on the ages at which both sexes could mate; and there would be a monitoring of the times of the year at which couples could mate. "The best of each sex" would produce future leaders.[37] Because he recognized that superior parents might possibly breed inferior children,[38] Plato specified that all babies be removed from their parents at birth. If children were raised apart from their parents,[39] no favoritism would mar the judging of each child's intellectual abilities in the meritocracy that was the Republic. The truly superior children would be selected out from the rest for the rigorous training given to the Guardians.

The higher studies, mathematics and dialectic, were intended to raise those with the ability to do conceptual work, which was far above the education of the senses (provided by music, literature, and gymnastic), "up to the real world which we shall call the true pursuit of wisdom."[40] The road up was formidable, and only those with the greatest endurance would be eager and able eventually to reach the Ideal of Goodness.[41] But Plato was insistent that his state must compel the best students to undertake the rigorous training. They were to be pushed up the ascent "to the vision of Goodness," the "highest object of knowledge."[42] Once the vision had been cherished, the descent must be made for the good of the whole state.[43]

Plato divided mathematics into parts. Arithmetic was a conceptual tool because "the properties of number appear to have the power of leading us towards reality" and of converting "the soul itself from the world of becoming [i.e., the world of the senses] to truth and reality." Arithmetic forced the mind "to arrive at pure truth by the exercise of pure thought."[44] Geometry was "knowledge of the eternally existent," and it "tends to draw the soul towards truth and directs upwards the philosophic intelligence which is now wrongly turned earthwards."[45]

Because "the third dimension should come after the second,"[46] solid geometry followed plain geometry in Plato's system. Astronomy, not the empirical science requiring the student to study the heavens, but a purely theoretical sort "to illustrate our study of those realities,"[47] followed solid geometry. A mathematical form of music, harmonics, where intelligence, rather than the ears, would be used, would succeed astronomy.[48]

Following ten years of mathematics, with the mind then prepared for conceptual study, the would-be philosophers were introduced to dialectic, the "coping-stone" of Plato's whole structure. "There is no other study that deserves to be put above it," said Plato. The very nature of Goodness itself would be revealed, he held, through the power of "the mastery of the technique of asking and answering questions."[49] The philosophers, understanding everything through thought alone, would be able to see the Forms, the Ideals. Dialectic would be studied for five years, and then the students were returned to active life until they were fifty years old.[50] After fifty, their lives were to be spent in study and in contemplating the Form of the Good.[51] Plato wrote in **Timaeus**:

> . . . a man who has given his heart to learning and true wisdom and exercised that part of himself is surely bound, if he attains the truth, to have immortal and divine thoughts. . . .[52]

When the mind is set "upon the things that are," wrote Richard Nettleship, the philosopher "gazes on that which is certain and ever the same."[53]

By the time that Plato wrote his **Laws**, his final, incomplete work, he was no longer quite the reformer that he had been in **Republic**. Many of the old emphases remained — his concern with the molding of children, his concern for the education of women, and his interest in lifelong learning — but there was a more realistic, less strident tone overall.

Very early in **Laws** Plato sought to define education, and he decided that it was training "from others" in citizenship, not in "the tools of a trade."[54] He belittled practical training for the world of work as being "coarse and illiberal" and said that "it had no claim whatever to be called education."[55] Education of the sort he favored was a "lifelong task which everyone should undertake to the limit of his strength."[56] Once again Plato stressed the importance of continuing to learn throughout one's life span.

In **Laws**, Plato placed great emphasis on pre-emergence education of the potential human being, and he defined this very early molding as "athletics of the embryo."[57] This shaping should begin in the womb, with the pregnant mother being urged to take long walks and to move about because movement helped the child's development.[58] Even after birth, movement was held to be beneficial to the new baby, and rocking was advocated. Until the age of three the baby was to be carried about by strong nurses.[59] Rhythmic motion of the child in the arms of a nurse who was dancing to music of flutes induced a "feeling of calm and peace in the soul,"[60] which helped a wakeful child "pipe down" so that it could fall asleep.

The eugenic approach to human breeding was not a part of **Laws**, wherein true marriage was supported and in which parents were allowed to raise their own children.[61] Children between the ages of three and six were to be kept happy and were to be brought together daily for supervised play.[62] At age six, the boys and girls were to be separated, but the education of each sex was to continue. Although education for the boys would consist of riding, archery, javelin-throwing and slinging, the girls also could choose to take those lessons. Both sexes were to be taught the use of weapons. The left hand was to be trained, as well as the right, so that a child would not grow up to be a warrior who was "lame handed."[63]

Elementary education for pre-adolescents included gymnastic and music. Gymnastic was divided into dancing and wrestling, with dancing being used to imitate literature and war, and with wrestling being a preparation for military life.[64] Play was encouraged, and the games were to be played according to fixed rules, for Plato felt that any innovation in the rules would encourage children to favor changes, not only in play, but in citizenship. He wanted to insure conformity in all things because, since he had designed a perfect system, change would be undesirable by definition.[65]

Education in **Laws** was to be public education, with state schools and gymnasia housed in buildings in the center of the city and in the suburbs.[66] Foreign teachers were to be hired as resident instructors to teach military and cultural subjects. Education was to be "compulsory for 'one and all' . . . because . . . children belong to the state first and their parents second."[67] Repeated emphasis was given to the education of women, and Plato declared that a state which neglects the education of females "is absolutely stupid" because it is then only half a state "and develops only half its potentialities."[68]

The curriculum for children over seven included three years of literature study until age ten, and three years of music until age thirteen.[69] During those six years the children were also to learn to read and write passably,[70] and "any whose natural abilities have not developed sufficiently by the end of the prescribed time . . . should not be pressed."[71]

Little, if any, attention was given to the rigorous selection process which was so much a part of education in Plato's **Republic**. A higher educational curriculum, consisting of arithmetic, geometry, and astronomy, would be offered to adolescents, but few would really be able to learn the theoretical content of those subjects which were thought to be useful preliminary studies preceeding the higher kinds of knowledge.[72] Little emphasis was laid on the study of dialectic, which had been so important in the **Republic**. The whole tone of **Laws**, when higher education was discussed, was one of practicality, rather than metaphysical necessity.

The top ruling body in **Laws** was the Nocturnal Council, which was described as having three functions, legal, philosophical, and didactic.[73] Members of the governing group would need a "more specialized training and education than others" so that they could see "not merely . . . the many individual instances of a thing, but also . . . attain a knowledge of the single central concept," the Form. They would be able to understand the Form of the Good, that common element which "is to be found in courage, restraint, wisdom, and justice." The Nocturnal Council "must have genuine knowledge of the real nature" of the laws of the city state if they were to be genuine guardians of the state.[74]

The Academy

In a perfect state like the Republic, philosophers would be kings and would be active in public life.[75] Because democratic Athens was far from perfect for Plato, real philosophers had to retreat from public life in order to maintain their integrity.

This aloofness from public life, which was characteristic of philosophers, had been on Plato's mind for a long time. In **Gorgias**, Plato had Socrates ask the question, "In what way should one live one's life? . . . by being an active politician?" No, was his answer to his own question, for it "should be this present life of mine immersed in philosophy."[76] In **Phaedo**, Plato spoke of philosophy persuading the soul to withdraw from things of the sensate world.[77] This other-worldliness of the philosopher was illustrated in **Theaetetus** by the story of the absent-minded Thales falling into a well.[78] "The philosopher," said Plato's jesting Socrates, "is wholly unacquainted with his next-door neighbor; he is ignorant, not only of what he is doing, but he hardly knows whether he is a man or an animal." This is true because he is so absorbed in "searching into the essence of man" and "busy in enquiring what belongs to such a nature to do or suffer different from any other."[79] And in the **Republic** Plato cautioned that "the multitude can never be philosophical . . . it is bound to disapprove of all who pursue wisdom."[80] Therefore, in the world as it was, with the mob disapproving of him, the philosopher had to retreat in order to keep from having his ideals compromised.

Believing as he did in the relationship between the ideal man and the ideal state, that one was impossible without the other, Plato compelled his philosopher to stand off from the world of politics and to retreat to some haven where he could continue to learn about what was real without being disturbed. Plato was not persuaded of the prudence of Socrates' encounters with ordinary people about Athens, for, after all, Socrates was executed. Therefore, Plato established an intellectual retreat within the Athens area, and there he began to teach and to write and to converse with other scholars and with students. The students, impressed by Plato's growing reputation, came to the Academy for an indefinite period of study.

Plato was not the first Greek to establish a school. The early nature philosophers had attracted followers who informally studied with them. The Pythagoreans had established numerous intellectual-mystical communities, where they pursued knowledge of music and mathematics. The sophists surrounded themselves with paying students. Socrates had a loyal group of admirers. Isocrates, a contemporary of Plato, set up a school of literature in the Lyceum.[81]

The distinctive nature of Plato's school was found in its formal institutionalization,

its organization, and the theoretical base underlying it. Presumably it was an effort to put into effect Plato's theory that mathematics and dialectic were foundation stones for the use of pure reason. Its success can be measured somewhat by the fact that it continued to exist, in one form or another, from about 387 B.C., when Plato began to teach, until 529 A.D., when the Emperor Justinian closed down all pagan institutions, including the Academy.[82]

Plato's school was established within walking distance of Athens, in a public park, where there were gardens and temples and walkways. The park was named for the hero Hekademus, who was buried there.[83] From the park's name, Plato took the name for the Academy, and he dedicated it to the Muses, patrons of education. Because he was an Athenian citizen and able to own land, he bought property in the park and began to teach in 387 B.C. Plato did not own the public gymnasium and lecture facilities, in which the school's sessions were held, because as public property they were available for any to use. Lynch noted the openness of the Academy, which anyone was permitted to attend (even an occasional woman), if he had the leisure for the hours of talking, exercising, dining, and walking which participation demanded.[84] Fees were not required during Plato's time, though his successors instituted payments by students.[85]

There was no fixed age span for learning at the Academy. Tradition held that Aristotle began to study there at age seventeen and that he stayed for twenty years.[86] "Eudoxus and the Corinthian farmer Nerinthos were much older than Aristotle when they began to study."[87]

Both W.K.C. Guthrie and A. E. Taylor [88] wrote that Plato lectured and used the dialectical method to teach. Harold Cherniss argued differently, however, because he became convinced that Plato probably did not lecture at all.[89] Only one Platonic lecture was recorded, and it was very badly received by the public.[90] Cherniss believed that Plato was not so much a professor as an administrator of a learning community, a Fourth Century "think tank," so to speak. Plato, according to Cherniss, was available to offer advice, to criticize, and to set a tone.[91]

The curriculum of the Academy was principally mathematics and dialectic, the same higher learning that was proposed for philosophers in the **Republic**. Mathematics, particularly geometry, was studied by the younger students, but not to the point of specialization.[92] In his **Metaphysics** Aristotle mentioned one student who was bitterly disappointed in the quality of mathematics instruction at the Academy, and charged it with fraudulent advertising.[93] Aristotle, himself, who apparently stayed for so long at the academy, was not particularly adept at mathematics. It seemed that it was taught as an aid to abstract thinking and not for itself as a science.[94] The study of dialectic was permitted only for very mature students, because Plato felt that it was a dangerous subject for young minds.

Few of Plato's students accepted his theory of Forms. Aristotle rejected the concept of Forms, and even Plato's chosen successor as head of the Academy, Speusippus, doubted them. This suggested that Plato did not indoctrinate the students with "firmly fixed dogma," which his students had to accept.[95] He wrote his dialogues, which the students were free to read and discuss, but he did not push his ideas on them. Though the students of Plato diverged in their ideas,[96] they all "remained attached to the Academy" and wrote of its influence on them.

Plato's great hope was that students of his system might finally go back into public life as statesmen. In fact, several students of the Academy did advise governments outside Athens, according to both Guthrie and Brumbaugh.[97] Plato wrote in his **Seventh Letter** of his own rather frustrating experience abroad advising a head of state.[98]

The Academy and Plato influenced the course of philosophy throughout the Hellenic and Roman worlds. Plato's most famous pupil, Aristotle, differed from his

teacher in essential ways, while retaining much that was Platonic. Aristotle founded his own school, the Peripatos (Lyceum,) and in turn, it was to have an influence on the Hellenic world by disseminating the Peripatetic idea throughout the domain of Alexander the Great.

NOTES

[1]*Meno*, 81d-e.

[2]*Phaedo*, 65b.

[3]Ibid., 65c-66a.

[4]Plato's Forms, his most famous invention, were an elaboration of Socrates' definitions of moral abstractions.

[5]*Phaedo*, 77a.

[6]Ibid., 114c-d.

[7]*Republic*, 505a-506a, translated and comments by Francis M. Cornford, in *The Republic of Plato* (New York: Oxford University Press, 1945).

[8]Ibid., 514a-521b.

[9]Ibid., 517b-c.

[10]Ibid., 517d.

[11]Ibid., 519d.

[12]Ibid., 509d-511e.

[13]From F. M. Cornford's commentary, *The Republic of Plato*, p. 222, and R. C. Cross and A. D. Woozley, *Plato's Republic: A Philosophical Commentary* (London: Macmillan and Co., Ltd., 1964), p. 230.

[14]*Republic*, 434d-441c.

[15]Words describing the parts of the soul differ among translations. The ones used here are taken from Cornford, *The Republic of Plato*, pp. 129-130.

[16]*Republic*, 439d.

[17]Ibid., 441d.

[18]William Boyd, *The History of Western Education* (9th ed.; London: Adam & Charles Black, 1969), p. 35.

[19]*Republic*, 431d.

[20]Ibid., 433d.

[21]Ibid., 500d.

[22]Ibid., 501e.

[23]Ibid., 504b.

[24]Athenian society, although labelled "democratic" because all male citizens did actually participate actively in every part of the city's government, excluded from participation in the government foreigners (metics) and slaves. On the shoulders of these excluded metics and slaves rested the economy of Athens. The affluence caused by their labor enabled Athenian males to enjoy leisure, which allowed them to attend the assembly, sit on the jury, and enjoy lifelong learning in intellectual communities such as the Academy and the Lyceum. Plato was a creature of his age, and he did not question slavery, though he did favor more opportunity for women. He disliked democracy and hoped for the return of aristocracy. He shared the contempt of all affluent Athenians for manual labor, and his educational system stressed liberal studies to prepare the mind for its philosophical quest.

[25]*Protagoras*, 325e-326b.

[26]*Republic*, 376e-378e.

[27]Ibid., 491e-492a.

[28]Ibid., 400d-401d.

[29]Ibid., 412a.

[30]Ibid., 407c.

[31]Ibid., 410c.

[32]Ibid., 536e-537d.

[33]Ibid., 539c-540c.

[34]Kathleen Freeman attributed his attitudes toward women to his admiration for Sparta and for the Pythagoreans, both of which allowed women to participate. *God, Man and State* (Westport, Conn.: Greenwood Press, 1952), p. 183.

[35]*Republic*, 456c.

[36]Ibid., 452b.

[37]Ibid., 459d.

[38]*Protagoras*, 319e-320a.

[39]*Republic*, 460c.

[40]Ibid., 521e.

[41]Ibid., 504b.

[42]Ibid., 519d.

[43]Ibid., 521b.

[44]Ibid., 525b-526a.

[45]Ibid., 527b.

[46]Ibid., 528b.

[47]Ibid., 529c.

[48]Ibid., 530d.

[49]Ibid., 534e.

[50]Ibid., 539e.

[51]Ibid., 540b.

[52]*Timaeus*, 90b-c, translation and comments by Desmond Lee, in *Plato: Timaeus and Critias* (New York: Penguin Books, 1971).

[53]Nettleship, *The Theory of Education in Plato's Republic* (Oxford: University Press, 1935), p. 26.

[54]*Laws*, 644a, translation and comments by Trevor Saunders, in *Plato: The Laws* (New York: Penguin Books, 1970).

[55]Ibid.

[56]Ibid., 644b.

[57]Ibid., 789b.

[58]Ibid., 790c-e.

[59]Ibid., 789e.

[60]Ibid., 790e.

[61]Ibid., 790d.

[62]Ibid., 794a.

[63]Ibid., 794e.

[64]Ibid., 795e-796d.

[65]Ibid., 797b-800a.

[66]Ibid., 804c-804d.

[67]Ibid., 804d.

[68]Ibid., 805a.

[69]Ibid., 809c-810a.

[70]Reading was not valued very highly in a culture which prized the spoken word. Even philosophers read very little, so that Aristotle, who read much, was referred to as "the reader." John Patrick Lynch, *Aristotle's School* (Berkeley: University of California Press, 1972), p. 88.

[71]*Laws*, 810b.

[72]Ibid., 818a-c.

[73]Trevor Saunders, comments, *Plato: the Laws* (England: Penguin Books, 1970), p. 516.

[74]*Laws*, 965a-966b.

[75]*Republic*, 473e.

[76]*Gorgias*, 500c.

[77]*Phaedo*, 83a; 84a.

[78]*Theaetetus*, 174a.

[79]Ibid., 174b.

[80]*Republic*, 494a.

[81]William Boyd, *The History of Western Education*, p. 35.

[82]J. J. G. Kidd, "Greek Academy," *Encyclopedia of Philosophy*, III.

[83]Robert S. Brumbaugh, *The Philosophers of Greece* (New York: Thomas Y. Crowell Company, 1964), p. 140.

[84]John Patrick Lynch, *Aristotle's School*, p. 56.

[85]Kidd, "Greek Academy," p. 382.

[86]Gilbert Ryle strongly challenged this, holding that the evidence was against Aristotle's having been there more than a few years. *Plato's Progress* (Cambridge: University Press, 1966), p. 225.

[87]Lynch, in *Aristotle's School*, mentions these two older students on p. 65.

[88]W. K. C. Guthrie, *A History of Greek Philosophy*, IV (Cambridge: University Press, 1975), p. 20, and A. E. Taylor, *Plato: The Man and His Work* (London: Methuen & Co., Ltd., 1960), p. 6.

[89]Harold Cherniss, *The Riddle of the Academy* (Berkeley: University of California Press, 1945), p. 75.

[90]Ibid., p. 1.

[91]Ibid., p. 69.

[92]Ibid., p. 68.

[93]Ibid.

[94]Ibid., p. 68.

[95]Frantisek Novotny, *The Posthumous Life of Plato* (The Hague: Martinus Nijhoff, 1977), p. 20.

[96]Ibid., p. 20.

[97]Guthrie, *History*, p. 23; Robert S. Brumbaugh, *The Philosophers of Greece*, p. 141.

[98]*Seventh Letter*, translated by J. Harward, in *Great Books of The Western World* VII.

CI 15

ARISTOTLE AND LIFELONG LEARNING

Metaphysical Bases

Aristotle, though strongly influenced by Plato, created new ways of thinking about how learning occurred in the individual. He rejected Plato's theory of Forms and the process of Recollection, preferring to place a great deal more emphasis on the role of experience in learning. "Out of sense-perception comes to be what we call memory," he believed, "and out of frequently repeated memories of the same thing develops experience."[1] Through the senses, a person apprehends the individual instance, while through reasoning about a collection of individual instances, the person comes to understand universals, or abstractions. External experience gives man a knowledge of that which surrounds him, while introspection and thinking about that experience allow him to understand concepts.[2] A philosopher must have many experiences on which to base his reasoning, so the study of philosophy demands considerable maturity.[3]

Aristotle wrote that every living thing grows toward some end, the end being implicit in the matter which contains it:

> Everything that Nature makes is means to an end. For just as human creations are the products of art, so living objects are manifestly the products of an analogous cause or principle, not external but internal, derived . . . from the environing universe.[4]

This end, or telos, was not a Form in the Platonic sense, but was, for Aristotle, a form of another sort built into everything. The acorn had within it the form of the oak, and not the oak at its prime, but the oak throughout its span of life. The human embryo had within it the form of the human being throughout its entire lifetime. The entirety of life was as important for Aristotle as it had been for Socrates and Plato.

Man's form was the complete development of that which made him most identifiably human and set him apart from other living things. Because his most distinctive quality was his intelligence, the most complete man was one who had cultivated his intelligence fully, throughout his entire life.[5] This might allow man to come as close as possible to Aristotle's divinity, which was pure mind, eternally thinking on thinking.[6] "The gods,"[7] explained the philosopher, "enjoy a life blessed in its entirety; men enjoy it to the extent that they attain something resembling the divine society . . . So happiness is coextensive with study."[8] The most god-like man would be the one who shared in the godly attribute of mind in the act of thinking.

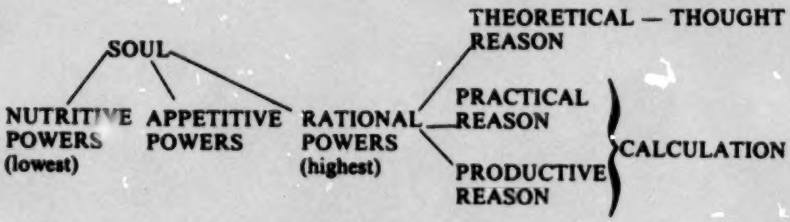
At the conclusion of the last chapter of **Nicomachean Ethics**, in which he developed his most advanced theory of happiness for man, Aristotle stated this:

> A man whose activity is guided by intelligence, who cultivates his intelligence and keeps it in the best condition, seems to be most beloved by the gods . . . they rejoice in what is best and most akin to them, and that is our intelligence.[9]

Aristotle's conception of the soul is important to his argument for lifelong learning as an Ideal. The soul was the lively part of the body, "the power in the tool."[10] That which "has soul in it . . . displays life," and "the soul is in some sense the principle of animal life."[11] The soul gives form to the matter of the body and provides the telos, or potentiality, for the physical matter.[12]

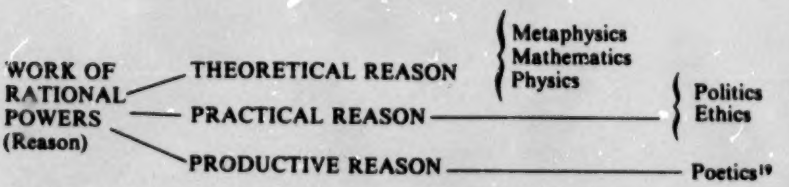
Aristotle's soul was not divided into parts, as was Plato's soul, but it did possess certain powers, those being the nutritive powers (i.e., nutrition, reproduction, growth, decay), the appetitive powers (i.e., movement, sensation, desiring, wishing), and the rational powers (i.e., knowing, perceiving, opining).[13] All living things possess the first

power, believed Aristotle, for nutritive powers are part of the meaning of life itself.[14] Some animals possess appetitive powers; but only man possesses the rational powers of the soul. Rational powers imply mental activity of a high order.[15] "Certain living things," explained Aristotle, "possess calculation and thought," and they "are a small minority."[16]



The education of the powers of the soul, so that a person might achieve his highest potential, was a lifelong process. All education was "for the sake of reason"[17] because the development of the rational powers was the fulfillment of that which was unique to man.

The rational powers of the soul, through which man was able to know, perceive, and make judgments, included both theoretical and calculative parts. Subjects of theoretical knowledge, wrote Aristotle, were metaphysics, mathematics, and physics (i.e., the study of moving things); while calculative knowledge included both practical (e.g., ethics, politics) and productive (e.g., art, music, dance, literature) subjects. Theoretical knowledge was good in itself, while practical and productive knowledge enabled some change to take place, either creatively, for man individually, or for society as a whole.[18] Education, which was concerned with changing people in a society, was a part of calculative reason.



Aristotle felt that theoretical reason was the "best part of us," for the most divine part of man was found "in that . . . activity concerned with theoretical knowledge or contemplation."[20] He concluded that "intelligence is the highest possession we have in us" and "study is loved for its own sake."[21] For Aristotle, "the activity of our intelligence constitutes the complete happiness of man, provided that it encompasses a complete span of life." Such a life would be more than human, and a man who lived it would do so, not insofar as he was human, but because there was a divine element within him. "A life guided by intelligence is divine in comparison with human life."[22]

Thus, Aristotle believed that the end for man, who possessed the ability to reason, was to develop that capacity to its greatest extent throughout a complete span of life. The mind of man would, at the completion of life, have achieved that which might possibly be immortal.[23]

Education from Childhood to Old Age

Aristotle divided practical reason, that sort of intelligence which was concerned with the well-being of man, into ethics, for man individually, and politics, for man

collectively. Politics was higher than ethics, he thought, because the development of the good man was for the good of the state, not the reverse. He wrote, "Subjects must first become good men, so that they may later rule."[24] One role of the state was to provide the means by which men would be able to become good, for he was certain that people did not become good through chance but as a "result of knowledge and purpose,"[25] The "main concern of politics is to engender a certain character in the citizens and to make them good and disposed to perform noble actions."[26] The statesman was to be an educator, in effect, whose aim was to "make the citizens good and law abiding,"[27] because a city was virtuous only "when the citizens who have a share in the government are virtuous."[28]

The role of the state as educator was to mold the good citizen, and develop an artistic creation called "the good man." The legislator "must mold newly-born children," he pointed out in **Politics**,[29] and citizens should be "molded to suit the government" under which they live.[30]

Education was not only for the purposes of the state, but it had an end in itself. "Every art or applied science and every systematic investigation, and similarly every action and choice, seem to aim at some good," he thought, that good being "that at which all things aim."[31] Education was desired because it was good for man and was part of politics, whose end was the good for man which was attainable by action.[32] That good for man was happiness, which meant living well, doing well, and faring well.[33] To some extent, education was an inexact endeavor because there was no precision in determining just what was the correct amount of it. There was also no precision in determining its quality. The best judge of what was to be a good education was the mature person who had "received an all-round schooling," and who was experienced in such matters.[34] The very young person was ill-equipped to be a student of politics or an expert in education because "he has no experience in the actions which life demands of him." Time would make up for this because his deficiency was that of living.[35]

The highest good attainable by action, which was what politics aimed at, "must be something final,"[36] and that final end was "happiness," which was "of all things the one most desirable."[37] Happiness, for which man's development was undertaken, was an activity "in conformity with excellence or virtue," which led to a certain kind of life, pursued over a life's span. A complete lifetime was needed to achieve man's telos, his form, his actuality, "for one swallow does not make a spring, nor does one sunny day; similarly, one day or a short time does not make a man blessed and happy."[38]

The success of this lifetime of actively seeking a virtuous life was partly the result of the efforts of the state, partly of the efforts of home and friends, partly of one's own diligence, and partly of good fortune. Aristotle was very conscious of the part played by fortune in the pursuit of happiness, and he mentioned it more than once. "Happiness," he said, "needs external goods" and "some element of good fortune" because a life lived without the goods of fortune might be "obstructed by their absence."[39] A life of virtue is desirable, he observed, "when virtue has external goods enough for the performance of good actions,"[40] and "a good life requires a supply of external goods."[41]

Along with a little bit of luck, a happy man required leisure, so that he might study and develop his intellectual powers free of the struggle to support himself. He regarded happiness "as depending on leisure." Work was good if it allowed a person to have free time, just as war was good if it allowed for peace. The balance was important.[42]

The state had the role of providing the opportunity for education so that the citizenry could acquire the excellences. "Since the whole city has one end," he insisted, "it is manifest that education should be one and the same for all, and that it should be public, and not private."[43]

Whereas Plato had favored a meritocracy wherein each child, regardless of sex or

economic status, would have an equal chance to acquire advanced education in order to become a Guardian, Aristotle was content to accept the social status quo. Slaves were not worth considering, he felt, for they were merely "living tools," without any "deliberative faculty." Women were not worthy of attention because, while they possessed a deliberative faculty, they possessed it "without authority." And besides, "silence is a woman's glory," he reminded the reader.[44] His conclusion was that all, slaves and women included, should have training in right conduct, particularly since "half of the free persons in a state are women,"[45] but he failed to pursue the subject of their education further than that remark.

Training of all participating citizens in the excellences was mandatory because "the salvation of the community is the common business of . . . all." Training should be in relation to the type of constitution which a state followed, for a democracy might require somewhat different excellences than a monarchy or an aristocracy. Aristotle even speculated that the training of a "good man" and a "good citizen" might differ if a state were not of the best sort:[46] "Being a good man is perhaps not the same as being a good citizen of some particular kind of state, whatever it may be."[47]

In an effort to analyze the proper sort of education to produce the best citizen of the state, Aristotle differentiated between three stages of growth, each requiring a specific type of learning. Stage one was that of a purely physical type, and it involved developing the ability to control the nutritive powers of the soul. Stage two was training in character, and it involved learning to control the appetites. Stage three was intended to develop the higher reasoning powers of the soul.

Starting the child off in a healthy manner was an important part of the molding process during the first stage of learning. Mothers were to give their infants milk, and very little wine, in order to lessen the chance of disease. Aristotle urged activity for children, along with early exposure to as much hardship as the child could bear.[48]

Between the ages of one and five, the child was to remain free of study and work, lest his growth be impeded. Physical activity, games, loud crying, and screaming were all recommended as good exercise. Aristotle wanted children to be told wholesome stories, to hear only proper speech, and to see only decent pictures and stage shows.[49] Children were to be left with slaves as little as possible, for they were not a good influence. When the child was five years old, he was to be permitted to watch older children receiving instruction, but was not actually to attend school.[50]

The second stage of learning was intended to be a time of attention to controlling the appetitive powers of the soul. This involved a specific course of study as well as habituation in the excellences. The course of study for the child, up to puberty, included reading and writing, gymnastic, music, and drawing.[51] Music and gymnastic were traditional, but the emphasis on reading and writing was quite Aristotelian. He observed that "it is clear that children should be instructed in some useful things — for example, in reading and writing — because many other sorts of knowledge are acquired through them." Drawing was defended because it "makes . . . [the students] judges of beauty in the human form."[52] Music was a worthy subject because it aided "intellectual enjoyment in leisure,"[53] and built character.[54] Children were to learn to play an instrument and to sing, so that they would be good listeners and critics. They should not become professional artists, but remain amateurs only, lest over-specialization rob them of music's liberating power.[55] Flute playing was to be discouraged, for the flute did not express moral character, was too exciting, and "made the face ugly."[56]

Gymnastic exercises were to produce a trained body, not an overdeveloped, vulgar body. Aristotle cautioned that physical activity and mental stress should not be engaged in at the same time, for the "two kinds of labor are opposed to one another; the labour of the body impedes the mind, and the labour of the mind the body."[57]

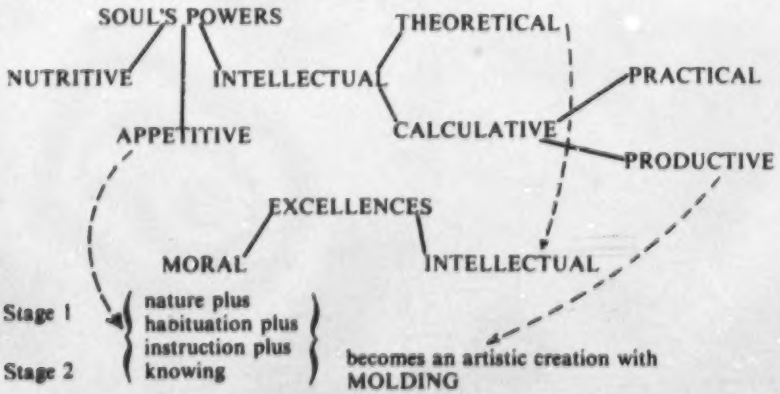
Aristotle believed that the state should be greatly concerned with moral excellence and with engendering right character in its citizens so as "to make them good and disposed to perform noble actions."[58] Virtue helped a person to be happy, and happiness was the chief goal of ethics and of politics. Aristotle repeatedly referred to happiness as "an activity of the soul in conformity with virtue," and by human virtue he meant "excellence of the soul."[59]

Aristotle distinguished between two distinct types of excellence, intellectual and moral. The moral virtues were associated with the appetitive powers of the soul, which enabled a person to experience desire. He explained that "moral virtue . . . is formed by habit," whereas intellectual virtue originated chiefly with teaching.[60] "We learn some things by habit and some by instruction," he noted.[61] The moral virtues were instilled by repeatedly doing the right thing. Early training was absolutely essential so that the young person would, without hesitation, choose to act excellently: "To be a competent student of what is right and just . . . one must first have received a proper upbringing in moral conduct."[62]

In order to become habituated, activities had to be "of a certain kind, since any variations in them will be reflected in our characteristics."[63] Early childhood habituation was no small matter; "on the contrary, it makes a considerable difference, or, rather, **all the difference** [emphasis added]."[64] A correct early education trained a person to "feel pleasure and pain at the proper things,"[65] so that the excellences became, with habituation, characteristics. No longer were they merely emotions or capacities, but were fixed and habitual acts of character.[66]

Aristotle, in explaining how the excellences were to be judged, indicated that moral excellence should achieve "a median between excess and deficiency."[67] When he made this analysis of the "median," Aristotle abruptly changed his emphasis from habituation to "choosing" between excess and deficiency. "Excellence," he observed, "is a characteristic involving choice, and . . . it consists in observing the mean relative to us, a mean which is defined by a rational principle, such as a man of practical wisdom would use to determine it."[68] Where right action had earlier been habitual, Aristotle now talked about how hard it was to be good: "In every case it is a task to find the median," and "the decision rests with our moral sense."[69]

Aristotle explained that it was man's practical reason, that which allows us to deliberate well "about what is good and advantageous" for ourselves,[70] which enabled him to choose the right course of action. Practical wisdom deals "with things that can be other than they are," and it concerns itself with "human affairs and with matters about which deliberation is possible."[71]



Aristotle noted the relation between practical wisdom and moral excellence when he explained that a man "fulfills his proper function only by way of practical wisdom and moral excellence or virtue; virtue makes us aim at the right target, and practical wisdom makes us use the right means."[72] He presupposed a basic, early habituation, which made a person do the right things without thinking. At some age, when the reasoning powers were developing, the person deliberately began to do the right things for the right reasons.

If one assumed that practical reason was the determiner of the mean for right moral action, what was to be used as a criterion, or model, for proper behavior? Aristotle felt that, when in doubt, the person who desired to act well should follow the lead of a good person, someone who acted in accordance with virtue.[73] This person would surely be an older man with much experience because practical wisdom demanded experience. That was why Aristotle said that because they lacked experience, the young could not be students of certain subjects. He elaborated on this theme by explaining:

> While the young men do indeed become good geometricians and mathematicians and attain theoretical wisdom in such matters, they apparently do not attain practical wisdom. The reason is that practical wisdom is concerned with particulars as well as with universals, and knowledge of particulars comes from experience. But a young man has no experience, for experience is the product of a long time. In fact, one might also raise the question why it is that a boy may become a mathematician but not a philosopher or a natural scientist. The answer may be that the objects of mathematics are the result of abstraction, whereas the fundamental principles of philosophy and natural science come from experience.[74]

Thus both Plato and Aristotle recognized that a subject such as philosophy requires a maturity based on long life experience, and that its study should follow the learning of those things which do depend on experience. Experience of particulars would arouse wonder in the mind, Aristotle observed, as did Socrates before him, and "it is owing to their wonder that men both now begin and at first began to philosophize . . . And a man who is puzzled and wonders thinks himself ignorant." Philosophy, he said, is an effort to escape from the feeling of ignorance, which the observing of phenomena and the experience of particulars arouses.[75]

The third stage of learning involved the development of the intellectual powers of the soul, and Aristotle's writing about this stage was incomplete. Despite his obvious respect for intellectual development, in **Politics** the outline of the curriculum for the three levels was cut off suddenly, as if a portion of the work had been lost or was never written. From internal evidence of his other works, however, it is possible to speculate about what Aristotle's higher education might have included, had he completed **Politics**. For one thing, he valued the observation of things about him through use of the senses, and the drawing of theories from this observation. Surely his third stage of learning would have included a study of nature and of astronomy and of human psychology. He wrote books on each of these subjects,[76] and it is thought by many authorities that these books were based on lectures given to his students.[77] Rhetoric and syllogistic logic were probably part of his curriculum, for he wrote on both. Mathematics was not as important to him as it had been to Plato, so that subject might have been stressed less than biology and botany.[78] In each of his writings he included an historical overview showing what others had said on the subject, so his curriculum might have included a history of ideas.

For the very mature student, he would have introduced the study of ethics and politics as intellectual pursuits, based on theory wedded to previous life experiences. Philosophy and metaphysics would be core courses for those able to pursue theoretical speculation based on observation of particulars.[79] What specific age was meant by "mature" is hard to guess, but Plato had stressed age fifty for the study of philosophy,

and Aristotle would probably have chosen the middle years. Plato, Socrates, and Aristotle all argued for the continued study of philosophy until the completion of life so that the potential of man might be actualized as fully as possible.

Aristotle felt that the development of the theoretical intelligence was the highest goal for man, for through the theoretical powers man could know "the unchangeable" first principles of the things which he had studied. This type of intelligence was not aimed at altering people, or making them happy, but was a study of unchanging realities for themselves alone.[80] Though theoretical study was not aimed at producing happiness, it was actually the highest sort of happiness, for "if happiness is activity in conformity with virtue, it is to be expected that it should conform with the highest virtue, and that is the virtue of the best part of us."[81] The best part of man, that which made him most akin to the divine, was found in activity of the theoretical sort, in contemplation of things which were unchanging. Intelligence "is the highest possession we have in us, and the objects which are the concern of intelligence are the highest objects of knowledge. Philosophy, the love of knowledge, "holds pleasures marvellous in purity and certainty," and "time spent in knowledge is more pleasant than time spent [working with particulars]."[82]

Aristotle had emphasized the importance of man's arriving at a mean between excess and deficiency when cultivating moral excellence. But concerning intellectual excellence, he felt that there could not be an excess because the highest development of intellectual powers was desirable. "The activity of our intelligence," he believed, "constitutes the complete happiness of man, provided that it encompasses a complete span of life; for nothing connected with happiness must be incomplete." Such a life lived in contemplation would be close to a divine life, for "a life guided by intelligence is divine in comparison with human life . . . it far surpasses everything else in power and value."[83]

The Peripatos (Lyceum)

Aristotle's view of the state was not as utopian as Plato's largely because the younger man was more the observer from afar than was his teacher. Plato had wanted to reform Athens and to make it better able to ward off enemies such as Sparta. Aristotle was not a citizen of Athens but had come to Athens as a youth to study at the Academy. His political sense told him that there was not one "best" constitution, but several sorts, of which some could be better than others. He collected 158 constitutions of city states of Greece and elsewhere and studied them to be able to discern the universals from the particulars.[84] He did agree with Plato that a good man might not be comfortable in the state in which he lived, for individual virtue and the ends of the state might be at odds. In a sense, both the Academy and the Lyceum were retreats for scholars who wanted to study and to engage in intellectual activity.

Aristotle's school was evidently a brotherhood of scholars and learners who grouped themselves into a learning community under the guidance of Aristotle. It was located in a public park, just outside the city walls of Athens. The park, a sanctuary dedicated to Apollo Lykeios, was quite large and was used for many purposes, including drilling of troops in time of war.[85] It was wooded, had a source of water, and contained a public gymnasium, the Lyceum, which had been built during the time of Pericles.[86]

Aristotle's school did not dominate the Lyceum, for the public gymnasium continued to be used by other elements of the Athenian public. Aristotle's activities were thought to have been undertaken in a colonnaded walkway called the peripatos, and his students came to be called the "peripatetics."[87] Later generations of scholars who followed in his tradition continued to call themselves peripatetics.[88] John Lynch chose to call Aristotle's school the "Peripatos," rather than the "Lyceum."[89] Aristotle was known as the "scholarch," or first among equals, and his fellows were either scholars who taught and did research or younger persons who learned from the others.

The relations among the participants were informal, without any oaths of loyalty, dietary rules, or initiation rites. No one philosophy was adhered to, though the philosopher's ideas must have met with great respect.[90] No fees were charged, but each participant had to have sufficient funds to allow him to have leisure to study, to attend all-day discussions and lectures, to eat communal meals, and to use the gymnasium for physical exercise.

Aristotle lectured extensively, and many sources believe that much that is now preserved as his writing came from these lectures. Jaeger reported a tradition which held that Aristotle delivered his more difficult lectures to students in the mornings and opened up his afternoon lectures on rhetoric and dialectic to the public.[91] In his lectures, Aristotle used diagrams, outlines, charts, and other pedagogical techniques.[92]

A truly distinctive aspect of Aristotle's Peripatos, and one which set it apart from the Academy, was the emphasis on collecting things and on making those collections available to the students. Aristotle's collection of maps was set out on boards; his collection of writings, notes, and constitutions was contained in the first library in history.[93] His collections of zoological and botanical specimens were preserved in order that he and his students might pursue empirical research in their quest to understand the world about them. All of these treasures demanded a great amount of space. Since he was not a citizen of Athens, and was unable to own property, he had to depend on the use of the public Lyceum, and his often precarious political fortunes caused apprehension about the future of the institution. His good friend Theophrastus, an Athenian citizen who succeeded as scholarch after Aristotle's twelve years, was able to buy property which allowed some continuity of space.[94]

Neither the Academy nor the Peripatos had official standing in Athens; but the city considered them to be valuable resources, which attracted students from all over the Greek world. Both schools provided philosophers with an other-worldly retreat in which to pursue learning for its own sake. The students and scholars, who remained for an indefinite length of time, were able to develop their intellectual powers as far as they could. According to Aristotle's beliefs, they came close to the gods, or at least as close as was possible before the completion of life.

NOTES

[1] *Posterior Analytics*, 100a, in Richard McKeon, general editor, *Introduction to Aristotle* (2nd ed., Chicago: University of Chicago Press, 1973).

[2] *On the Soul*, 417b10-20, in *Introduction to Aristotle*.

[3] *Nicomachean Ethics*, 1142a10-15.

[4] *On the Parts of Animals*, 641b10, in *Introduction to Aristotle*.

[5] *Nicomachean Ethics*, 1177a10-20.

[6] *Metaphysics*, 1074b30, in *Introduction to Aristotle*.

[7] Aristotle used "god" and "gods" interchangeably.

[8] *Nicomachean Ethics*, 1178b25.

[9] Ibid., 1179a20.

[10] *On the Soul*, 413a.

[11] Ibid., 413a20.

[12] Ibid., 412a20.

[13] Ibid., 411a25.

[14] Ibid., 434a20.

[15] Ibid., 414b20.

[16] Ibid., 415a5.

[17] *Politics*, 1334b25, in *Aristotle's Politics*, translation by Benjamin Jowett. (New York: The Modern Library 1943).

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[18] *Nicomachean Ethics*, 1137a5-1140a.

[19] "Poetics" means the creative, or productive, arts.

[20] *Nicomachean Ethics*, 1177a15.

[21] Ibid., 1177a20.

[22] Ibid., 1177b20-25.

[23] *On the Soul*, 430a10-20.

[24] *Politics*, 1333a15.

[25] Ibid., 1332a30.

[26] *Nicomachean Ethics*, 1099b30.

[27] Ibid., 1102a10.

[28] *Politics*, 1332a30.

[29] Ibid., 1335a5.

[30] Ibid., 1337a10.

[31] *Nicomachean Ethics*, 1094a.

[32] Ibid., 1094b5.

[33] Ibid., 1095a15.

[34] Ibid., 1095a.

[35] Aristotle repeated this point later in *Nicomachean Ethics* when he pointed out that a young man could not have practical wisdom, which was dependent on experience. 1142a10-15.

[36] *Nicomachean Ethics*, *1097a30*.

[37] Ibid., 1097b15.

[38] Ibid., 1098a15.

[39] Ibid., 1099a30-65.

[40] *Politics*, 1323b40.

[41] Ibid.

[42] *Nicomachean Ethics*, 1177b5; *Politics*, 1333a15-1334a1[illegible]

[43] *Politics*, 1337a10. In his analysis of moral and intellectual excellence, Aristotle indicated that education should be fitted to the individual.

[44] Ibid., 1260a10-25.

[45] Ibid., 1260b15.

[46] Ibid., 1276b15-30.

[47] *Nicomachean Ethics*, 1130b25.

[48] *Politics*, 1336a5.

[49] Ibid., 1336a25-35.

[50] Ibid., 1336b35.

[51] Ibid., 1337b25.

[52] Ibid., 1338a35-40.

[53] Ibid., 1338a20.

[54] Ibid., 1339b40.

[55] Ibid., 1340b20-1341b25.

[56] Ibid., 1341a25.

[57] Ibid., 1338b10-1339a5.

[58] *Nicomachean Ethics*, 1099b30.

[59] Ibid., 1102a15.

[60] Ibid., 1103a15.

[61] *Politics*, 1333a40.

[62] *Nicomachean Ethics*, 1095b5.

[63] Ibid., 1103b20.

[64] Ibid., 1103b25.

[65] Ibid., 1172a20; 1104b10.

[66] Ibid., 1106a10.

[67] Ibid., 1106a15-b15.

[68] Ibid., 1106b35. "Mean" and "median" are used interchangeably in this translation.

[69] Ibid., 1109a25-b20.

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[69]Ibid., 1140a25.

[71]Ibid., 1140b20-25.

[72]Ibid., 1144a5.

[73]Ibid., 1176a15.

[74]Ibid., 1142a10-15.

[75]*Metaphysics*, 982b10-15.

[76]*Physics*, *The Heavens*, and *On the Soul*.

[77]Lynch, *Aristotle's School*, p. 91; Jaeger, *Aristotle* (London: Oxford University Press, 1948), p. 314; and Guthrie, *The Greek Philosophers from Thales to Aristotle* (London: Methuen & Co., Ltd., 1950), p. 125.

[78]John Burnet's conclusion, *Aristotle on Education* (Cambridge: The University Press, 1967), p. 129.

[79]Politics, see *Nicomachean Ethics*, 1095a; philosophy, see Ibid., 1142a10-15; metaphysics, see Ibid., 1177a20.

[80]*Nicomachean Ethics*, 1143b3-20.

[81]Ibid., 1177a10.

[82]Ibid., 1177a[illegible]-20.

[83]Ibid., 1177b25-30.

[84]Robert Brambaugh, *The Philosophers of Greece*, p. 182.

[85]Lynch, *Aristotle's School*, pp. 6-11.

[86]Ibid., pp. 12-30.

[87]Some writers attributed the name to the fact that the scholars "walked about" as they talked.

[88]Henri Marrou, *A History of Education in Antiquity* (New York: Sheed and Ward, 1956), p. 189; Jaeger, *Aristotle*, p. 316.

[89]Lynch, *Aristotle's School*, pp. 68-74.

[90]Ibid., pp. 74-82.

[91]Jaeger, *Aristotle*, pp. 316-317.

[92]Lynch, *Aristotle's School*, p. 90.

[93]Jaeger, *Aristotle*, p. 314; Lynch, *Aristotle's School*, p. 97.

[94]Lynch, *Aristotle's School*, p. 97.

CONCLUSION

In the Fourth Century, Plato and Aristotle developed theories of lifelong learning which held that the most complete happiness for man was achieved only through continuous study over a lifetime. Both built upon the groundwork laid by Socrates, who had emphasized lifelong learning; but Plato and Aristotle added metaphysical arguments to support their systems of thought. Both outlined a specific sequence of studies to develop the powers of reasoning, and both established institutions wherein students and scholars could pursue learning for an indefinite period of time.

Plato's metaphysical structure recognized that the rational part of the soul was not only its highest part, but was that which was most distinctively human. Plato conceived of the soul as being immortal and felt that it contained knowledge of the Forms, which were abstract truths which actually existed. Man, as a rational being, became most nearly divine when he sought within himself, through Recollection (or contemplation) a knowledge of the Forms, which were already within him due to his soul. After a lifetime of study, the philosopher might achieve a final vision of the highest and most comprehensive Form of all, the Form of the Good.

Aristotle also believed that the rational powers of man were that which most set him apart as human; but he refused to accept Plato's theory of Forms and Plato's belief in contemplation as the only means of gaining knowledge of truth. Aristotle preferred to believe that every living thing had built into its very matter a potential, or telos, toward which the thing developed, and that that end, or form, was not achieved until the completion of life itself. Because the power to reason was that which set man apart from other living things, the most complete development of man demanded the highest possible use of his rationality. Indeed, man's highest happiness came when he was engaged in thinking, in doing philosophy, until the completion of his life. Possibly, after a life spent in contemplation, a man might achieve some sort of union with the gods, who gave the initial impulse to start life moving toward its form, or actuality. Aristotle's divine was pure mind. Any human being who spent his life in study came close to this power and thus achieved happiness.

Both Plato and Aristotle believed that certain sorts of study enabled the philosopher to engage in a lifetime of study which propelled him toward his Ideal. Both stressed the importance of early molding of the child and the importance of stories and music and gymnastic for the growing body. Plato thought the study of mathematics to be particularly important in helping the adolescent mind learn to do abstract thinking, and he urged the study of arithmetic, geometry, astronomy, and music as intellectual tools to prepare the mind for philosophy.

Plato wanted the study of mathematics to be followed by a period of intensive study of dialectic, or logical reasoning, so that finally, at age fifty, when the learner was intellectually prepared, he could begin the study of philosophy. The study of philosophy would continue to engage his attention until the completion of life. The final days would be spent seeking a knowledge of the Forms, particularly the Form of the Good.

Aristotle valued early moldings as much as did Plato, but he placed less emphasis on the study of mathematics, and he placed more stress on the value of reading, writing, and drawing as tools to facilitate learning. Like Plato, Aristotle felt that the study of philosophy should come late in life, after experiences of living had given to the student a richness of thought which would make subjects which depended on experience more valuable. Aristotle valued the study of science and lectured to his students on astronomy, psychology, and biology.

While he believed that there should be a middle way, a mean, when it came to choices

of morality and right conduct, Aristotle insisted that there could be no mean when it came to intellectual excellence. There could not be too much development of the reasoning powers of the soul, for by studying such subjects as physics and metaphysics, which had no purpose beyond themselves, a student might be able to actualize his potential and come as close as possible to the gods. This fulfillment brought to man the highest possible happiness. It came after a lifetime of study, for, as he said in his *Nicomachean Ethics:*

> . . . the activity of our intelligence constitutes the complete happiness of man, provided that it encompasses a complete span of life.

Both Plato and Aristotle emphasized the importance of the complete span of life in determining the degree of happiness reached during that life. Both felt that study over a lifetime brought happiness, and both established schools in which scholars could spend an indefinite length of time in pure study for its own sake. The two philosophers viewed their schools as places where scholars could seek to achieve a final perfect happiness through study.

Plato hoped that the philosopher might be able to return to his state as a leader, but the reality of Athenian democracy made that impossible. Plato's Academy did provide a refuge from democracy, though at times some of the scholars were called on to be consultants to various governments in the Greek world. Aristotle's school provided for long term study and research, which was aided by the establishment of a library and a museum.

Thus the great Fourth Century philosophers of Greece, and Socrates, seen through the writings of Plato, supported lifelong learning. They pioneered in their analyses of that which constituted intellectual development and in the importance of the use of the mind throughout the span of life.

BIBLIOGRAPHY

Texts, Greek

Aristophanes. *The Clouds.* Intro. and notes W. W. Merry. New Ed. Oxford: Clarendon Press, 1965.

Aristotle, *Metaphysics.* trans. W. D. Ross, in *Introduction to Aristotle,* ed. Richard McKeon. 2nd ed., rev., enlarged. Chicago: University of Chicago Press. 1973.

_____ *Metaphysics.* trans. Hugh Tredennick. 2 vols. Cambridge, Mass.: Harvard University Press, 1951.

_____ *Nicomachean Ethics.* trans., intro., notes Martin Oswald. Indianapolis: The Bobbs-Merrill Co., 1962.

_____ *On the Parts of Animals.* trans. William Ogle, in *Introduction to Aristotle.*

_____ *On the Soul.* trans. J. A. Smith, in *Introduction to Aristotle.*

_____ *Physics,* trans. R. P. Hardie and R. K. Gaye, in *Introduction to Aristotle.*

_____ *Politics,* trans. by Benjamin Jowett. Intro. Max Lerner. New York: Random House, 1943.

_____ *Posterior Analytics.* trans. G. R. G. Mure, in *Introduction to Aristotle.*

Herodotus. *The Famous History of Herodotus.* trans. BR. 1584. New York: AMS Press, 1967.

Pericles. "Funeral Oration." From Thycydides, in Paul Monroe, ed., *Source Book of the History of Education for the Greek and Roman Period.* trans. Benjamin Jowett. New York: The Macmillan Co., 1926.

_____ "Funeral Oration." Found in *Thycydides: Peloponnesian War.* trans. Crawley. New York: The Modern Library, 1951.

Plato. *Apology.* trans. G.M.A. Grube. *The Trial and Death of Socrates.* Indianapolis: Hackett Publishing Co., Inc., 1975.

_____ _____ *Charmides.* trans. Benjamin Jowett. *Great Books of the Western World,* Vol. VII. Chicago: Encyclopedia Britannica, 1952.

_____ *Crito.* trans. G.M.A. Grube. *The Trial and Death of Socrates.*

_____ *Euthyphro.* trans. G.M.A. Grube. *The Trial and Death of Socrates.*

_____ *Gorgias.* trans. W. C. Helmbold. *Plato: Gorgias.* Indianapolis: The Bobbe-Merrill Company, Inc., 1952.

_____ *Laws.* trans. Trevor J. Saunders. *Plato: The Laws.* New York: Penguin Books, 1970.

_____ *Laws.* trans. and notes Benjamin Jowett. *The Dialogues of Plato,* II. New York: Random House, 1937.

_____ *Meno.* trans. W.K.C. Guthrie. *Plato: Protagoras and Meno.* New York: Penguin Books, 1956.

_____ *Phaedo.* trans. G. M. A. Grube. *Plato's Phaedo.* Indianapolis: Hackett Publishing Company, Inc., 1977.

_____ *Protagoras.* trans. W. K. C. Guthrie. *Plato: Protagoras and Meno.*

_____ *Republic.* trans. Benjamin Jowett. *Great Books of the Western World.*

_____ *Republic.* trans. Francis M. Cornford. *The Republic of Plato.* New York: Oxford University Press, 1945.

_____ *Seventh Letter.* trans. J. Harward. *Great Books of the Western World.*

_____ *Theaetetus.* trans. Benjamin Jowett. *Great Books of the Western World.*

_____ *Timaeus.* trans. Desmond Lee. *Plato: Timaeus and Critias.* New York: Penguin Books, 1971.

Solon. "Fragment 17." in Kathleen Freeman, The Work and Life of Solon, with a Translation of His Poems. New York: Arno Press, 1976. (Orig. pub. 1926).

Thycydides. *The Complete Writings of Thycydides: The Peloponnesian War.* trans. Crawley. New York: The Modern Library, 1951.

Secondary Sources

Adkins, Arthur W. H. *Moral Values and Political Behavior in Ancient Greece, from Homer to the End of the Fifth Century.* New York: W. W. Norton & Co., 1972.

Allen, R. E. *Plato's "Euthyphro" and the Earlier Theory of Forms.* London: Routledge and Kegan Paul, 1970.

Barclay, William. *Educational Ideals in the Ancient World.* London: Collins, 1959.

Barrow, Robin. *Plato, Utilitarianism, and Education.* London: Routledge & Kegan Paul, 1975.

Boyd, William. *The History of Western Education.* rev. Edmund J. King. 9th ed. London: Adam and Charles Black, 1969.

Brumbaugh, Robert S. *The Philosophers of Greece.* New York: Crowell, 1964.

_____ and Nathaniel M. Lawrence. "Aristotle's Philosophy of Education," *Educational Theory,* 1:1-15, January, 1959.

Burnet, John, trans. and ed. *Aristotle on Education, Being Extracts from the Ethics and Politics.* Cambridge: University Press, 1967.

_____. *Early Greek Philosophy.* 4th ed. Cleveland: Meridian Books, 1957.

Cherniss, Harold F. *The Riddle of the Early Academy.* Berkeley: University of California Press, 1945.

Clarke, Martin Lowther. *Higher Education in the Ancient World.* Albuquerque: University of New Mexico Press, 1971.

Cornford, Francis M. *From Religion to Philosophy: A Study in the Origins of Western Speculation.* New York: Harper, 1957.

_____. *Plato and Parmenides: Parmenides' "Way of Truth" and Plato's "Parmenides."* Indianapolis: The Bobbs-Merrill Co., Inc., n.d. (Original pub. 1939).

_____. *Principium Sapientiae: The Origins of Greek Philosophical Thought,* ed. W. K. C. Guthrie. Gloucester, Mass: Peter Smith, 1971.

_____ trans. and notes, *The Republic of Plato.* New York: Oxford University Press, 1945.

Cross, Robert C., and A. D. Woozley. *Plato's Republic: A Philosophical Commentary.* London: Macmillan and Co., Ltd., 1964.

Dobson, J. F. *Ancient Education and Its Meaning for Us.* New York: Longmans, Green and Co., 1932.

Eby, Frederick, and Charles Flinn Arrowwood. *The History and Philosophy of Education, Ancient and Mediaeval.* Englewood Cliffs, N.J.: Prentice-Hall, 1958.

Frankena, William K. *Three Historical Philosophies of Education: Aristotle, Kant, Dewey.* Chicago: Scott, Foresman & Co., 1965.

Freeman, Kathleen. *God, Man and State: Greek Concepts.* Westport, Conn.: Greenwood Press, 1952.

_____. *The Work and Life of Solon, with a Translation of His Poems.* New York: Arno Press, 1976. (Original pub. 1926).

Freeman, Kenneth J. *Schools of Hellas: An Essay on the Practice and Theory of Ancient Greek Education from 600 to 300 B.C.* New York: The Macmillan Co., 1970.

Grube, G. M. A., trans. and notes. *Plato's Phaedo.* Indianapolis: Hackett Publishing Company, Inc., 1977.

_____ trans. and notes. *The Trial and Death of Socrates.* Indianapolis: Hackett Publishing Company, Inc., 1975.

Guthrie, W. K. C. *The Greek Philosophers from Thales to Aristotle.* London: Methuen & Co., Ltd., 1950.

_____. *A History of Greek Philosophy.* 4 vols. Cambridge: University Press, 1969-1975.

_____ trans. and notes. *Plato: Protagoras and Meno.* New York: Penguin Books, 1956.

_____. *The Sophists.* Cambridge: The University Press, 1971.

Helmbold, W. C., trans. and notes. *Plato: Gorgias.* Indianapolis: The Bobbs-Merrill Company, Inc., 1952.

Irwin, Terence. *Plato's Moral Theory: the Early and Middle Dialogues.* Oxford: Claredon Press, 1977.

Jaeger, Werner. *Aristotle: Fundamentals of the History of His Development.* trans. Richard Robinson. 2nd ed. London: Oxford University Press, 1948.

_____. *Paideia: The Ideals of Greek Culture,* trans. Gilbert Highet. 3 vols. New York: Oxford University Press, 1939-1943.

Ostwald, Martin, trans. and notes. *Nicomachean Ethics.* Indianapolis: The Bobbs-Merrill Co., 1962.

Robinson, John Mansley. *An Introduction to Early Greek Philosophy.* Boston: Houghton Mifflin, 1968.

Ross, W. D. *Aristotle: A Complete Exposition of His Works and Thought.* New York: Meridian Books, Inc., 1959.

Rowe, Christopher. *An Introduction to Greek Ethics.* New York: Harper & Row Publishers, Inc., 1977.

Rusk, Robert R. *The Doctrines of the Great Educators.* 3rd ed. New York: St. Martins' Press, 1965.

Ryle, Gilbert. "Plato." *Encyclopedia of Philosophy,* 1967, VI.

_____. *Plato's Progress.* Cambridge: The University Press, 1966.

Saunders, Trevor J., trans. and notes. *Plato: The Laws.* New York: Penguin Books, 1970.

Sorabji, Richard. *Aristotle on Memory.* Providence: Brown University 1972.

Taylor, A. E. *Plato: The Man and His Works.* London: Methuen & Co., Ltd., 1960.

Tigner, Steven S. "The Nature of Plato's Theory of Anamnesis." Unpublished Doctoral dissertation, University of Michigan, 1968.

Vlastos, Gregory. "Introduction: The Paradox of Socrates." *The Philosophy of Socrates.*

_____, ed. *The Philosophy of Socrates: A Collection of Critical Essays.* Garden City, N.Y.: Doubleday and Company, Inc., 1971.

_____, comp. *Plato: A Collection of Critical Essays.* 2 vols. Garden City, N.Y.: Anchor Books, 1971.

_____ *Plato's Universe.* Seattle: University of Washington Press, 1975.

Walden, John W. H. *The Universities of Greece.* Freeport, N.Y.: Books for Libraries Press, 1909. (Reprinted 1970).

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